

## CLAIMS

1. A material for organic light emitting device, comprising  
a gold complex in which gold is bonded to at least one atom selected  
5 from the group consisting of carbon, oxygen and sulfur.

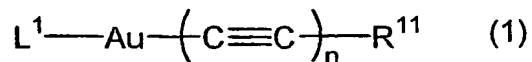
2. The light-emitting material for organic light-emitting  
device comprising the gold complex as claimed in claim 1, wherein  
the at least one atom selected from the group consisting of carbon,  
10 oxygen and sulfur, bonded to gold is bonded to only one other  
atom than gold.

3. The light-emitting material for organic light-emitting  
device comprising the gold complex as claimed in claim 1, wherein  
15 the at least one atom selected from the group consisting of carbon,  
oxygen and sulfur, is carbon.

4. The light-emitting material for organic light-emitting  
device comprising the gold complex as claimed in claim 3, wherein  
20 the carbon atom bonded to gold is bonded to a nonmetallic element  
through a triple bond and to the gold through a single bond.

5. The light-emitting material for organic light-emitting  
device comprising the gold complex as claimed in claim 4, wherein  
25 the nonmetallic element is carbon.

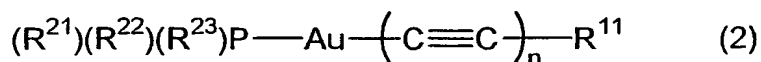
6. The light-emitting material for organic light-emitting  
device as claimed in claim 5, wherein the gold complex is a compound  
represented by formula (1)



wherein  $L^1$  represents a monodentate ligand or a bidentate ligand,  
n is an integer of 1 to 5, and  $R^{11}$  represents a hydrogen atom,

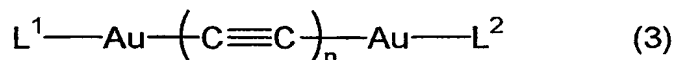
a halogen atom, a cyano group, a silyl group, or an alkyl group, aryl group, alkoxy group, acyl group, carboxyl group or alkoxy carbonyl group that optionally has a heteroatom.

- 5 7. The light-emitting material for organic light-emitting device as claimed in claim 6, wherein the gold complex is a compound represented by formula (2)



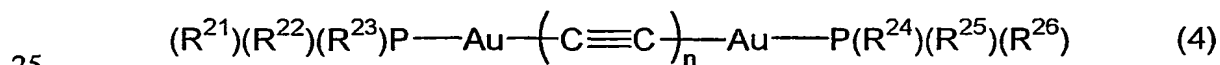
- 10 wherein n and  $R^{11}$  have the same meanings as claimed in claim 6 above,  $R^{21}$  to  $R^{23}$  independently represent each a hydrogen atom, an amino group, a cyano group, a silyl group, or an alkyl group, aryl group, alkoxy group, aryloxy group, or alkylamino group that optionally has a heteroatom.

- 15 8. The light-emitting material for organic light-emitting device as claimed in claim 5, wherein the gold complex is a compound represented by formula (3)



- 20 wherein  $L^1$  and  $L^2$  independently represent each a monodentate ligand or a bidentate ligand, and n represents an integer of 1 to 5.]

9. The material for organic light emitting as claimed in claim 5, wherein the gold complex is a compound represented by formula (4)

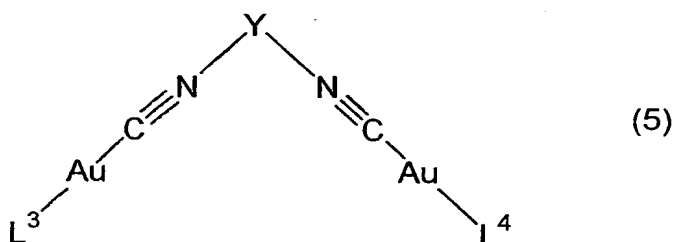


wherein n represents an integer of 1 to 5, and  $R^{21}$  to  $R^{26}$  independently represent each a hydrogen atom, an amino group, a cyano group, a silyl group, or an alkyl group, aryl group, alkoxy group, aryloxy group or alkylamino group that optionally has a heteroatom.

10. The light-emitting material for organic light-emitting device comprising the gold complex as claimed in claim 4, wherein the nonmetallic element is nitrogen.

5 11. The light-emitting material for organic light-emitting device comprising the gold complex as claimed in claim 10, wherein the nitrogen atom forming a triple bond with the carbon atom bonded to gold is further bonded to another carbon atom.

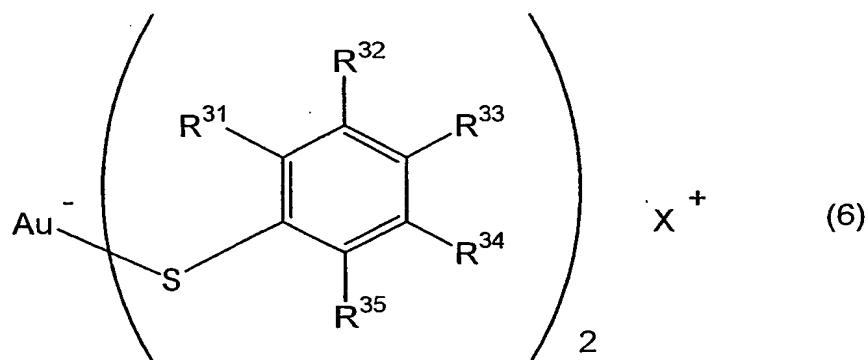
10 12. The light-emitting material for organic light-emitting device as claimed in claim 11, wherein the gold complex is a compound represented by formula (5)



15 wherein Y is an alkylene, a cycloalkylene, an arylene, or an organic group consisting of two or more of the three groups, same or different, alternately bonded to each other, and  $L^3$  and  $L^4$  independently represent each a monodentate or bidentate ligand.

20 13. The light-emitting material for organic light-emitting device comprising the gold complex as claimed in claim 1, wherein the at least one atom selected from the group consisting of carbon, oxygen and sulfur is sulfur.

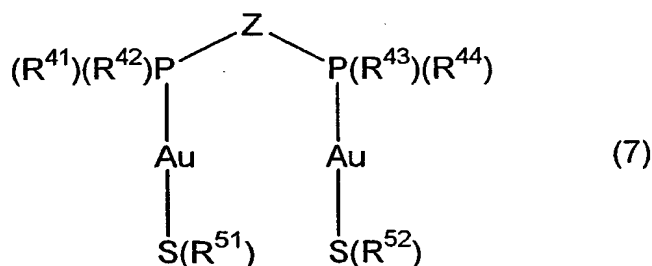
25 14. The light-emitting material for organic light-emitting device comprising the gold complex as claimed in claim 13, wherein the gold complex is a compound represented by formula (6)



wherein  $\text{R}^{31}$  to  $\text{R}^{35}$  independently represent each a hydrogen atom, a halogen atom, a hydroxyl group, a nitro group, an amino group, a cyano group, a mercapto group, a silyl group, a sulfonic acid group, a sulfonic acid ester group, a phosphoric acid group, a phosphonic acid group, or an alkyl group, aryl group, alkoxy group, acyl group, a carboxyl group, an alkoxycarbonyl group or acyloxy group that optionally has a heteroatom, and  $\text{X}^+$  represents a monovalent cation.

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15. The light-emitting material for organic light-emitting device comprising the gold complex as claimed in claim 13, wherein the gold complex is a compound represented by formula (7)



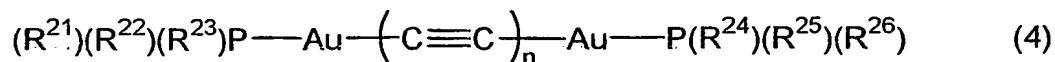
15 wherein  $\text{R}^{41}$  to  $\text{R}^{44}$ ,  $\text{R}^{51}$  and  $\text{R}^{52}$  independently represent each a hydrogen atom, a cyano group, a silyl group, or an alkyl group, aryl group or acyl group that optionally has a heteroatom, and Z represents an alkylene, a cycloalkylene, an arylene, or an organic group consisting of two or more of the three groups, same or different, alternately bonded to each other.

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16. An organic light emitting device, comprising at least one

layer composed of organic compound including a light-emitting layer, sandwiched between a pair of electrodes, wherein at least one layer between the pair of electrodes contains the light-emitting material for organic light-emitting device as claimed in any one of claims 1 to 15 above.

17. A compound represented by formula (4)



wherein  $n$  represents an integer of 1 to 5, and  $R^{21}$  to  $R^{26}$  independently represent each a hydrogen atom, an amino group, a cyano group, a silyl group, or an alkyl group, aryl group, alkoxy group, aryloxy group or alkylamino group that optionally has a heteroatom (provided that  $n$  is neither 1 nor 2 when  $R^{21}$  to  $R^{26}$  all represent a cyclohexane ring).